

CLAIM AMENDMENTS

This listing of claims will replace all prior versions and listings of claims in the application.

Listing of Claims:

1. (Currently Amended): A processor-readable medium encoded with executable instructions that, when executed, direct a server computer to perform a method for ~~updating-executing software updates on a~~ plurality of client computers

software, the method comprising:

assigning, by the server computer, a first level of service to ~~each-one or more first client computers of a-the~~ plurality of client computers; ~~the server computer is assigned to manage;~~

~~.....~~ assigning, by the server computer, a second level of service to one or more second client computers of the plurality of client computers, the levels of service for ~~a-particular-assigned to the first and second client computers specifying information indicating a length of a time period between software update availability and software update installation, wherein the first level of service requires a first length of time for the software updates to be applied after being detected, and the second level of service requires a second length of time for the software updates to be applied after being detected, different from said first length of time~~comprising parameters regulating the application of updates to the particular client computer;

scheduling, by the server computer, performance of ~~one or more-the~~ software updates to the ~~particular-first and second~~ client computers according to

the level of service assigned to ~~each client computer of the particular-first and second client computers~~, wherein updating of the first client computers assigned the first level of service is scheduled to take place within the first length of time and updating of the second client computers assigned the second level of service is scheduled to take place within the second length of time, different from the first length of time;

~~establishing a specified grace period for allowing users to perform the software updates, followed by an enforcement period during which the software updates cannot be postponed, wherein a length of time of the grace period is based at least in part upon the first or second level of service assigned to a particular client computer of the plurality of client computers, wherein the first level of service has a grace period length of time different than the second level of service; and~~

initiating, by the server computer, execution of the software updates to the ~~particular-first and second client computers~~, according to the scheduling.

2. (Currently Amended): The processor-readable medium of claim 1, wherein the method further comprises:

configuring on the ~~particular-client computers~~, by the server computer, a postponement icon that, when displayed by the ~~particular-client computers~~ and selected by a user of the ~~particular-client computers~~, causes the execution of the software updates to be postponed for execution within ~~a-the established grace period, wherein the grace period is established as a predefined limited window of time-{grace-period}~~ within which the users of the client computers are able to

~~elect when the software updates are executed, wherein the grace period is followed by an the enforcement period within which selection of the postponement icon is prohibited so that execution of the software updates may not be further postponed, wherein upon ending of the grace period and onset of the enforcement period, the users of the client computers are forced to accept installation of the software updates.~~

3. (Currently Amended): The processor-readable medium of claim 2, wherein ~~assigning the level of service to each client computer comprises:~~
~~----- establishing the grace period and the enforcement period;~~
~~----- wherein by shortening the grace period, a higher level of service results due to more rapid application of the software updates.~~

4. (Currently Amended): The processor-readable medium of claim ~~1~~ 2, wherein the method further comprises:

configuring on a desktop of the particular client computer, by the server computer, an execution icon that, when displayed by the particular client computer and selected by a user, causes the execution of the software updates to be initiated immediately.

5. (Previously Presented): The processor-readable medium of claim 4, wherein configuring the execution icon comprises:

enabling the particular client computer to display a recurring reminder to install the software updates during the grace period; and

enabling the particular client computer to display the execution icon.

6. (Currently Amended): The processor-readable medium of claim 5, wherein:
the recurring reminder comprises information on grace and enforcement periods associated with the software updates scheduled for the particular client computer;

the grace period is a period during which the execution of the software updates is allowed to be postponed;

the grace period is configurable by a server administrator; and

the enforcement period is a period, configured by the server administrator to follow the grace period, during which execution of the software updates is not allowed to be postponed by the user of the particular client computer.

7. (Previously Presented): The processor-readable medium of claim 5, wherein enabling the particular client computer to display the execution icon comprises:

enabling an update start time to be modified by a user of the particular client computer; and

enabling a client computer reboot time to be modified by a user of the particular client computer, such that an update and a reboot are scheduled at different times.

8. (Currently Amended): The processor-readable medium of claim 1, wherein the method further comprises deploying recurring reminders to the particular first and second client computers after execution of an the software updates

~~package is completed and reboot has been postponed, reminding a users of the particular first and second client computers to reboot to fully complete the an update process.~~

9. (Currently Amended): The processor-readable medium of claim 1,
~~_____ wherein the method further comprises the server computer causing the a particular client computer of the first or second client computers to automatically perform the software updates during the enforcement period following the termination of a the grace period,~~

~~_____ wherein the grace period is a specified period of time during which the user of the particular client computer is allowed to postpone execution of the software updates on the particular client computer.~~

10. (Currently Amended): The processor-readable medium of claim 1,
~~_____ wherein the method further comprises enabling the a particular client computer of the first or second client computers to delay the performance execution of the software updates until after conclusion of a user-initiated postponement within a the grace period,~~

~~_____ wherein the grace period is a specified period of time during which the user of the particular client computer is allowed to postpone execution of the software updates on the particular client computer,~~

~~_____ wherein, following expiration of the grace period, the enforcement period begins, during which the user of the particular client computer cannot postpone execution of the software updates.~~

11. (Currently Amended): The processor-readable medium of claim 1,
_____ wherein the scheduling comprises ~~configuring~~ establishing a change time-window for each client computer, wherein the change time-window defines a period of time within which a client computer will ~~not be updated~~ restricted from performing the updates,

_____ wherein, when time remaining within the established change time-window for a particular client computer is less than an amount of time required for installing remaining software updates and rebooting of the particular client computer, the installation of the remaining software updates is suspended to return the particular client computer to service without exceeding the established change time-window.

12. (Currently Amended): The processor-readable medium of claim 11, wherein assigning the first or second level of service comprises configuring a duration of the change time-window, wherein a longer duration implies a higher level of service and a shorter duration implies a lower level of service.

13. (Previously Presented): The processor-readable medium of claim 11, wherein the scheduling further comprises:

defining, by the server, failsafe timeout periods for each of the software updates; and

adjusting, by the server computer, for each of the client computers, the failsafe timeout periods according to performance specifications of each

individual client computer, wherein longer failsafe timeout periods are assigned where the individual client computer performance is slower.

14. (Previously Presented): The processor-readable medium of claim 11, wherein the method further comprises:

applying, by the server computer, updates to each client computer during the change time-window scheduled for each client computer; and

monitoring each failsafe timeout for each update applied to each client computer.

15. (Previously Presented): The processor-readable medium of claim 11, wherein the method further comprises identifying, by the server computer, updates to a client computer for which there was insufficient time to complete the update within the change time-window, and re-scheduling the update for installation on the client computer within a second change time-window.

16. (Previously Presented): The processor-readable medium of claim 11, wherein the method further comprises, when time remaining within the change time-window of a client computer is less than a failsafe timeout for any remaining software updates scheduled for installation on the client computer during the time-change window, suspending application of the remaining software updates scheduled to for installation on the client computer.

17. (Previously Presented): The processor-readable medium of claim 11, wherein the method further comprises the server computer associating the client computers under the server computer's management into groups, wherein each group is assigned a change time-window, and the client computers associated with a particular group inherit the change time-window assigned to the particular group.

18. (Previously Presented): The processor-readable medium of claim 1, wherein the method further comprises:

grouping a plurality of the software updates into a package comprising a plurality of individual and distinct software updates configured for initialization with a single execution command; and

configuring the package for differential enforcement whereby each of the plurality of client computers receive the same package but different individual ones of the plurality of client computers install different software updates from within the package.

19. (Previously Presented): The processor-readable medium of claim 18, wherein the method further comprises the server computer programmatically obtaining the plurality of software updates from a trusted source of update content.

20. (Canceled)

21. (Previously Presented): The processor-readable medium of claim 18, wherein different rules of enforcement for each client computer service level are encoded within the package to result in differential application of the software updates within the package to different client computers based upon the service level assigned to each client computer.

22. (Currently Amended): The processor-readable medium of claim 18 further comprising partitioning the package of software updates to separate trusted updates from un-trusted updates.

23. (Currently Amended): The processor-readable medium of claim 22 further comprising merging, by the server computer, one or more un-trusted software updates with the trusted software updates based on performance of the one or more un-trusted updates in a test environment.

24. (Currently Amended): The processor-readable medium of claim 22, wherein the partitioning is expressed in XML (extensible markup language) configured to inform different individual client computers of updates suitable for their consumption.

25. (Currently Amended): The processor-readable medium of claim 1, wherein assigning the first level of service or the second level of service to each of the plurality of client computers comprises: incorporating an authorization list of

approved updates into a template, the template based upon an image of a client system with the approved updates installed.

26. (Currently Amended): The processor-readable medium of claim 25, wherein the template is written into an XML (extensible markup language) document.

27. (Original): The processor-readable medium of claim 26, wherein the XML document is consumed and deployed as a mirror of a desired state for software updates.

28. (Canceled)

29. (Currently Amended): A method for performing software updates on a client computer, the method comprising:

assigning a level of service to the client computer by a server computer for determining a frequency of performing software updates;

receiving, by the client computer, from ~~a~~the server computer, a software update to be executed on the client computer;

displaying, by the client computer, an icon configured to allow a client computer user a choice between displaying recurring software update reminders and immediate initiation of installation of the software update by the client computer, wherein the recurring software reminders include information on a grace period within which installation of the software update ~~may~~is able to be postponed and information on the onset of an enforcement period after which

installation of the software update ~~may~~ cannot be postponed, wherein upon ending of the grace period and onset of the enforcement period, the user of the client computer is forced to accept installation of the software update and no longer provided the option to postpone the software update; and

providing, by the client computer, a user interface to allow user-selection of a time for the client computer to perform the installation of the software update within the server-assigned grace period and to allow user-selection of a time for the client computer to initiate a reboot, separate from the installation and also within the server-assigned grace period, wherein the times selected for the grace period and enforcement period are based in part on ~~a~~ the level of service assigned to the client computer by the server computer.

30. (Currently Amended): A processor-readable medium comprising processor-executable instructions that, when executed, direct a client computer to execute a method for updating software on the client computer, the method comprising:

assigning a level of service to the client computer for determining a frequency of performing software updates;

displaying, by the client computer, a desktop icon that represents a choice between displaying recurring software update reminders and initiating immediate installation of software updates, wherein the recurring software update reminders include information on a grace period within which installation of the software updates by the client computer ~~may~~ is able to be postponed and information on the onset of an enforcement period after which installation of the software updates by the client computer ~~may~~ cannot be postponed, wherein

upon ending of the grace period and onset of the enforcement period, the user of the client computer is forced to accept installation of the software update and no longer provided the option to postpone the software update; and

providing, by the client computer, a user interface to allow user-selection of a time within the grace period for the client computer to perform the installation of the software updates and to allow user-selection of a time within the grace period and distinct from the time for the client computer to perform the installation, for the client computer to initiate a reboot, wherein the times selected for the grace period and enforcement period are based at least in part on the level of service assigned to the client computer.

31. (Previously Presented): The processor-readable medium of claim 30, wherein the method further comprises;

providing at repeated intervals, by the client computer, a user interface to facilitate the reboot of the client computer, where the software updates have been installed, the installation package has completed execution, and no reboot has been performed.

32. (Currently Amended): The processor-readable medium of claim 30, wherein the method further comprises;

setting the grace period and the enforcement period to facilitate determining a-the level of service provided to the client computer, wherein a shorter grace period indicates a higher level of service providing more frequent updates.

33. (Previously Presented): The processor-readable medium of claim 30, wherein the method further comprises periodically displaying, by the client computer, information about software updates that are available and have not yet been performed on the client computer.

34. (Currently Amended): A method executed by a server computer for performing software updates on a ~~plurality-group~~ of client computers associated with the server computer, the method comprising:

assigning a level of service to each client computer of the group of client computers for determining a frequency of performing software updates;

associating individual ones of the ~~plurality-group~~ of client computers into subgroups sized to allow simultaneous updating of the client computers in each subgroup without disrupting work flow of the entire group of client computers;

calculating an anticipated elapsed time required for application of each software update to be performed, while adjusting the anticipated time according to expectations for each client computer in each subgroup;

setting failsafe timeout periods for applying each software update based the anticipated time for completion of each software update, wherein installation is assumed to have failed and installation is terminated when the installation of a particular software update exceeds the failsafe timeout period set for the particular software update;

establishing a change time-window for each of the subgroups, wherein the change time-window establishes a specific time period for updating the client

computers in each subgroup during which the client computers in the subgroup may be taken down for update installation without disrupting the work flow of the entire group; and

initiating, by the server computer, software updates to each client computer of a particular subgroup, wherein the initiating is performed for the particular subgroup within the change time-window established for the particular subgroup; and

monitoring, by the server computer, a the failsafe timeout period for each software update on each client computer of the particular subgroup during installation of the software updates, wherein, when the failsafe timeout period is exceeded for a particular software update, the particular software update is suspended and a corresponding code is returned; and

when time remaining within the established change time-window is less than an amount of time required for installing remaining software updates and rebooting of the client computers in the particular subgroup, the installation of the remaining software updates is suspended to return the particular subgroup to service without exceeding the established change time-window.

35. (Currently Amended): A processor-readable medium encoded with executable instructions that, when executed, direct a server computer to perform a method for updating client computer software on a plurality group of client computers, the method comprising:

assigning a level of service to each client computer of the group of client computers for determining a frequency of performing software updates;

associating individual ones of the plurality of client computers into subgroups sized to allow simultaneous updating of the client computers in each subgroup without disrupting work flow of the entire group of client computers; calculating an anticipated elapsed time required for application of each software update to be performed, while adjusting the anticipated time according to expectations for each client computer in each subgroup; setting failsafe timeout periods for applying each software update based the anticipated time for completion of each software update, wherein installation is assumed to have failed and installation is terminated when the installation of a particular software update exceeds the failsafe timeout period set for the particular software update; establishing, for each of the subgroups, a particular change time-window, wherein the change time-window establishes a specific time period for updating the client computers in each subgroup during which the client computers in the subgroup may be taken down for update installation without disrupting the work flow of the entire group; and

initiating, by the server computer, software updates to each of the client computers associated with a particular one of the subgroups, wherein the initiating is performed within the particular change time-window established for the particular one of the subgroups;

monitoring, by the server computer, a failsafe timeout for each update on each client computer associated with the particular one of the subgroups during installation of the software updates, wherein, when the failsafe timeout period is

exceeded for a particular software update, the particular software update is suspended and a corresponding code is returned; and
when time remaining within the established change time-window is less than an amount of time required for installing remaining software updates and rebooting of the client computers in the particular subgroup, the installation of the remaining software updates is suspended to return the particular subgroup to service without exceeding the established change time-window.

36. - 37. (Canceled)

38. (Currently Amended): The processor-readable medium of claim 35, the method further comprising:

identifying, by the server computer, uninstalled software updates for installation in a second change time-window, wherein the uninstalled software updates for installation in the second change time-window were scheduled for installation in the particular change time-window for the particular subgroup, but were not installed in the particular subgroup during the particular change time-window; and

installing the uninstalled software updates during the second change time-window.

39. (Currently Amended): A method executed by a server computer for performing software updates to a plurality of client computers, the method comprising:

_____ assigning, by the server computer, a first level of service to one or more first client computers of the plurality of client computers,

_____ assigning, by the server computer, a second level of service to one or more second client computers of the plurality of client computers, the levels of service assigned to the first and second client computers specifying information indicating a length of a time period between software update availability and software update installation, wherein the first level of service requires a first length of time for the software updates to be applied after being detected, and the second level of service requires a second length of time for the software updates to be applied after being detected, different from said first length of time;

_____ scheduling, by the server computer, performance of the software updates to the first and second client computers according to the level of service assigned to each client computer of the first and second client computers, wherein updating of the first client computers assigned the first level of service is scheduled to take place within the first length of time and updating of the second client computers assigned the second level of service is scheduled to take place within the second length of time, different from the first length of time;

_____ establishing a specified grace period followed by an enforcement period for performing the software updates based at least in part upon the first or second level of service assigned to a particular client computer of the plurality of client computers, wherein the first level of service has a different grace period than the second level of service;

~~initiating, by the server computer, execution of the software updates to the first and second client computers, according to the scheduling; and~~
~~configuring on the first and second client computers, by the server computer, a postponement icon that, when displayed by the particular client computer and selected by users of the client computer, causes the execution of the software updates to be postponed for execution within the established grace period, wherein the specified grace period is established as a predefined limited window of time within which the users of the client computers elect when the software updates are executed, wherein the grace period is followed by the enforcement period within which selection of the postponement icon is prohibited so that execution of the software updates may not be further postponed, wherein upon ending of the grace period and onset of the enforcement period, the users of the client computers are forced to accept installation of the software updates~~
~~grouping a plurality of software updates into a package comprising the plurality of software updates, the package being independently executable;~~
~~configuring the package for differential enforcement, wherein the plurality of client computers each receive the same package, but different individual client computers are assigned, by the server, different periods of time within which a software update will be initiated; and~~
~~configuring the package for consumption by a Microsoft Systems Management Server (SMS) system.~~

40. - 48. (Canceled)

49. (Currently Amended): A method implemented by a server computer for performing software updates on a plurality of client computers, the method comprising:

assigning a level of service to each client computer of the plurality of client computers for determining a frequency of performing software updates, wherein a first level of service requires a first length of time in which the software updates are to be applied after being detected, and the second level of service requires a second length of time during which the software updates are to be applied after being detected, different from said first length of time;

using a ~~previously updated particular~~ client computer of the plurality of client computers as a reference client computer, wherein the reference client computer has a standard image representing the plurality of client computers used to generate a template of approved updates for facilitating update detection and deployment;

establishing a file to record information including approved updates approved for the reference client computer;

scanning the reference client computer in a template mode to generate a list of the approved updates to be applied to the standard image on the reference client computer;

incorporating the list of the approved updates into the template, wherein the approved updates needed for the plurality of client computers are a subset of updates identified from a larger update package;

deploying the template to ~~a~~ the plurality of client computers; and

initiating software updates to the plurality of client computers according to the template and the assigned level of service.

50. (Currently Amended): A processor-readable medium encoded with executable instructions that, when executed, direct a server computer to perform a method for updating client computer software on a plurality of client computers, the method comprising:

..... assigning a level of service to each client computer of the plurality of client computers for determining a frequency of performing software updates, wherein a first level of service requires a first length of time in which the software updates are to be applied after being detected, and the second level of service requires a second length of time during which the software updates are to be applied after being detected, different from said first length of time;

using a previously updated particular client computer of the plurality of client computers as a reference client computer, wherein the reference client computer has a standard image representing the plurality of client computers used to generate a template of approved updates for facilitating update detection and deployment;

..... establishing a file to record information including updates approved for the reference client computer;

..... scanning the reference client computer in a template mode to generate a list of the approved updates to be applied to the standard image on the reference client computer;

incorporating the list of the approved updates into the template, wherein the approved updates needed for the plurality of client computers are a subset of updates identified from a larger update package;

deploying the template of approved updates to ~~a~~ the plurality of client computers; and

initiating initiating software updates to the plurality of client computers according to the template of approved updates and the assigned level of service.

51. (Currently Amended): The processor-readable medium of claim 50, the method further comprising:

incorporating the template of approved updates into the file, wherein the file is an XML (extensible markup language) file.

52. - 53. (Canceled)

54. (Currently Amended): A processor-readable medium comprising processor-executable instructions that, when executed by a processor, instruct the processor to perform a method for performing software updates, the method comprising:

assigning a level of service to each client computer of a plurality of client computers for determining a frequency of performing software updates;

receiving a plurality of software updates from a trusted website;

grouping a subset of the plurality of software updates into a package;

~~configuring the package for consumption by a Microsoft Systems Management Server (SMS) system;~~

partitioning the package to divide trusted ones of the software updates from un-trusted ones of the software updates;

~~utilizing SMS to distribute~~ distributing the package to a plurality of client-computers;

associating the plurality of client-computers into groups;

establishing a change time-window for each of the groups;

expressing to each particular one of the plurality of client-computers, which software updates in the package are suitable and trusted for consumption by the particular client-computer;

installing updates on each of the plurality of clients within the change time-window established for the group the client is a member of;

installing the un-trusted software updates only on client-computers configured to install un-trusted software updates;

setting a failsafe timeout for each installation on each client computer with reference to an anticipated duration of installation of each software update on each client computer;

monitoring the failsafe timeout for each software update on each particular client computer;

determining if the failsafe timeout for each software update on a particular client computer is greater than time remaining within the change time-window for update installation on the particular client computer, and if so, suspending installation of the software update on the particular client computer.